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(SEE BULLETIN NO. 5) IRVING JOHNSON

BALINESE GIRLS DANCE OUT THE DRAMAS OF THEIR ISLAND PARADISE

Halo-ed with jewels and flowers, swathed in glittering brocades, Balinese dancers weave and sway to the tinkling music of the *gamelan*, their village orchestra. By the mere crook of a finger, the bend of an elbow, the slightest turn of the head, they interpret the drama of their native island.

Bulletin No. 1, December 1, 1952

Memorial at Dieppe, France, Honors Canadians

TO honor one of the most gallant exploits of World War II a memorial was recently dedicated to the Canadian troops who took part in the famous raid on Dieppe, France, on August 19, 1942.

On the tenth anniversary of the historic assault on the Normandy channel port—the first major attack of Allied forces on the coast of occupied France—a monument was unveiled on Puys Beach.

The raid was planned to try out the combination of land, sea, and air forces in a large-scale operation. It was a dress rehearsal for the invasion of the continent which took place nearly two years later.

Raid Gained Experience Valuable for Invasion

Of the 6,100 men who left England for the attack, only about 2,500 returned. The brunt of the fighting was borne by the Canadians, but the raiding force included British Commandos and a small detachment of United States rangers and "Fighting French," as they were then called.

The sortie against the port of Dieppe was a tactical failure, although survivors were brought back to England as planned. A few Germans were captured and some military installations were wrecked. But the experience gained proved its value during the successful Allied invasion of the Normandy beaches between the Cotentin Peninsula and the mouth of the Seine (about 90 miles to the west) on June 6, 1944.

Dieppe was a natural target for a test raid. It was known to be heavily fortified, and the narrow beaches of the region, backed by high chalk cliffs, presented obstacles that could be expected at many places on the invasion coast. Its deep and sheltered harbor is one of the best in eastern Normandy. The cliffs are broken there by the Arques River, whose channel forms the harbor and separates the main part of the town from the fishing section of Le Pollet.

Important as Resort Town

The harbor itself has two parts, a 16-acre outer section connected with a ten-acre inner basin. Both are lined with shipyards, wharves, warehouses, factories, shops, and cafés. It furnished a convenient haven for German ships, hence its destruction would have been of great value to the Allies.

Dieppe is primarily a resort town. Before the German invasion its population numbered about 25,000. Industries included processing of tobacco, porcelain manufacture, carving, and making of briquettes—small cakes of tar and coal used for firing boilers.

Four railways meet at Dieppe. One runs northeast along the coast for a few miles, and then inland to Abbeville and beyond. Another follows the coast west to Le Havre, and two run inland. The back country is mainly chalk plateau, broken by large and small rivers, some of which are diked to protect the rich meadowlands.

On the coast about Dieppe strong tides pound over tricky rock forma-

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DEPT. OF THE INTERIOR, CANADA

AT THE EASTERN TERMINUS OF AMERICA'S "INLAND COAST," FISHERMEN END THE DAY'S WORK

Where the long international boundary between Canada and the United States begins (Bulletin No. 3), setting the most eastern point of the United States at West Quoddy Head, Maine, the once-disputed St. Croix River flows into Passamaquoddy Bay. Fishing in these waters is one of the chief occupations on both sides of the border. Fishermen in the bay near St. Andrews set a seine buoyed up with corks to transfer the catch from a trap (left) to small boats.

Bulletin No. 2, December 1, 1952

Mineral Search Leads to Angola, Mozambique

THE world's great need for more and still more minerals is sending scientists flying and tramping over two of the earliest European colonies in Africa south of the Equator—Angola and Mozambique.

Both of these colonies belong to Portugal. Angola on the west coast of southern Africa and Mozambique on the east coast were discovered and claimed by adventurous Portuguese navigators who sailed around Africa toward the end of the 15th century.

May Have Been Land of King Solomon's Gold Mines

Control of Angola was obtained from African chieftains, while Mozambique was wrested from Arabs who had conquered it some time before. The two colonies combined have an area of 779,082 square miles, nearly five times the size of California, but their population is slightly smaller than the 10,000,000 plus of that state.

Interest in the mineral possibilities of Angola and Mozambique was aroused by discoveries in neighboring regions of Africa. A few minerals, notably copper and diamonds, have long been mined. Gold has also been found, and some writers have attempted to identify Mozambique with Ophir—source of King Solomon's gold.

But the greatest spur to exploration is the presence of uranium ore in Mozambique and near-by territory, plus the possibility that more of this valuable mineral may lie under terrain not yet explored.

The present search, a combined air and ground project, is expected to take two and a half years and to cost about $2,000,000. It is sponsored jointly by the Portuguese government and the Mutual Security Agency. Work is being done under contract by two United States firms.

Both Mozambique and Angola have been primarily agricultural since their discovery, and both export quantities of such tropical farm products as cotton, sisal, coffee, and fruits. Mozambique is an important source of cashew nuts, and both colonies export peanuts.

Mineral Discoveries Could Change Colonies' Economy

Cattle are raised extensively in both possessions, and the Portuguese government is making vigorous efforts in Angola to raise the quality and quantity of the livestock. A comparatively new animal industry is the raising of black karakul sheep.

The discovery of large-scale, workable mineral deposits might make mining of greater importance to the colonies than agriculture now is. And a mining economy would call for tremendous expansion of railroads and highways, dredging of ports, and introduction of new commerce.

The Portuguese government has stated that it would like to attract private money to develop mines, establish new industries, and build electric-power plants. Portugal hopes also to introduce modern methods of farming, to raise African living standards, and to attract large-scale immigration from the homeland.

The exploration may bring the colonies world-wide attention for the

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tions and treacherous shallows. Dense fogs veil the region. Some sections are fogbound so frequently that the summer sun seldom breaks through the murky sky.

A short distance to the northeast, traces of an ancient Roman camp mark the probable beginning of Dieppe. In the 10th century Norman seafarers sailed their ships into its *diep* (deep), or inlet. Later, toward the end of the 12th century, Henry II of England built a castle on the western cliffs. The present castle dates from 1435. The English occupied Dieppe for periods during the 12th and 15th centuries.

NOTE: Dieppe is shown on the National Geographic Society's map of Western Europe. Write the Society's headquarters, Washington 6, D. C., for a map price list.

See also "Rehearsal at Dieppe," in *The National Geographic Magazine* for October, 1942; and "Normandy—Choice of the Vikings," May, 1936. *(Back issues of the Magazine may be obtained from the Society's headquarters at 60¢ a copy, 1946 to date; $1.00, 1930-1945; $2.00, 1913-1929. Earlier issues at varied prices.)*

DRAWN BY NEWMAN-BUMSTEAD

FROM DIEPPE, COMMANDO OBJECTIVE OF 1942, WEST TO CHERBOURG, CHALK-CLIFFS AND SHINGLE BEACHES EDGE FRANCE'S HISTORIC "INVASION COAST"

Bulletin No. 3, December 1, 1952

U. S.-Canada Border Is Extra "Coast"

ACROSS the breadth of North America runs an invisible line. Its ends dip into Atlantic and Pacific. It ties two nations together, mixes up their geography, and gives the United States a "third coast."

The line is Uncle Sam's 3,986-mile international boundary with the Dominion of Canada.

Usually thought of as a land frontier, actually the Canadian border is more wet than dry. Winding from Grand Manan Channel off the Maine coast to the straits south of Vancouver Island, the line crosses 2,198 miles of water to only 1,788 miles of land. Four of the five Great Lakes—Superior, Huron, Erie, Ontario—comprise much of the water distance.

St. Croix River Caused Dispute

Since the War of 1812 this boundary, drawn originally through unsettled wilderness, has never had to be defended by force. It stands today as the longest unfortified frontier in the world.

At the east end of the line (illustration, inside cover) however, an almost-forgotten dispute nearly brought on war with Britain in 1839. The issue was the "St. Croix River" specified in the original border treaty. Partisans claimed different rivers were the St. Croix.

Acadian axmen crossed over into Maine to chop its towering pines, and New Brunswick tried to collect taxes from the territory. Maine marched 12 companies of militia north through deep snow to stand glowering guard over its rights.

This bloodless "Aroostook War" was settled finally by compromise in 1842 by the Webster-Ashburton Treaty. Later, it was revealed that the United States held two maps backing up Britain's claims to Maine territory, and the British Foreign Office had a secret map proving Maine's claim to 5,500 square miles of New Brunswick.

As it was drawn, the compromise line makes a cape named West Quoddy Head the easternmost point of land in the United States. Maine's northernmost town, still called Township 20, can be reached by road only by way of Canada. The boundary splits a number of its houses through their front parlors.

Lake of the Woods Most Northerly U. S. Point

Because Benjamin Franklin, John Jay, and John Adams didn't know where the Mississippi River began, there is a 130-square-mile chunk of United States territory north of Minnesota's mainland that is completely surrounded by water and Canada. This "Northwest Angle," hitched to Manitoba, is cut off from the rest of Minnesota by the Lake of the Woods.

Here the international boundary reaches its most northerly point, 49 degrees, 23 minutes, 4½ seconds north latitude, at the upper corner of Lake of the Woods. The writers of the treaty meant to run the line west from this point to the Mississippi River, the nation's western border until the Louisiana Purchase, in 1803. But the Mississippi's source is not that far north.

Thus the line drops south again to the 49th parallel, which it follows

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first time since the early days of World War II when interned United States and Japanese diplomats were exchanged at the neutral port of Lourenço Marques, capital of Mozambique.

NOTE: Angola and Mozambique may be located on the Society's map of Africa.

For additional information, see "Wings Over Nature's Zoo in Africa" (20 photographs), in *The National Geographic Magazine*, October, 1939; and "Pathfinder of the East," November, 1927.

See also, in the GEOGRAPHIC SCHOOL BULLETINS, January 31, 1949, "Portuguese Buy Beira, Portuguese Port."

GIGANTIC GOURDS HELP TO MAKE MUSIC IN PORTUGUAL'S WEST AFRICAN COLONY

A well-dressed audience of one listens attentively to home-grown music in the African jungle. Padded sticks tap the "keyboard" to produce melodies which somewhat resemble those of the marimba of Central American countries and the xylophone.

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France's Braille Centenary Draws to Close

DURING the year 1952 France is commemorating the death a century ago of Louis Braille, "light-bearer to the world of darkness." Braille invented the system, named for him, by which the blind can read.

Last June on the anniversary of his death, Braille's remains were transferred from the village of Coupvrai, where he died, to the Pantheon in Paris, where rest some of France's most illustrious dead. At the ceremonies, Helen Keller, perhaps the world's most famous blind person, spoke in French. She called the occasion "a celebration of all the years in which the sightless have banished darkness by the inner light of knowledge."

New Machine May Revolutionize Braille Printing

Braille is an arrangement of raised dots by which the blind can identify letters and words with their fingers. Although other systems have been developed, Braille has proved the most practical.

A Braille centenary was held in London last summer. Among the exhibits was a machine which may revolutionize the printing of Braille. It sets solid plastic dots on both sides of a sheet of paper at the same time. The machine makes possible the production of any number of books and magazines on paper thinner and cheaper than that required by the original method of raising the dots with a sharp instrument.

Under the auspices of the United Nations Educational, Scientific, and Cultural Organization, Braille is being standardized around the globe to serve 7,000,000 sightless people speaking some 85 languages.

A step toward world Braille was taken last year at a conference at Beirut, Lebanon. Experts, gathered from the Middle East, India, southeast Asia, and Africa, agreed on an enlarged and unified Braille script to replace the 20-odd local versions in use in these regions.

"Talking Books" Are Popular

The next step was a meeting to iron out differences in Braille scripts used by Spanish-speaking countries. Blind readers in English-speaking nations have used a uniform script since 1932.

Important as Braille is, however, it is not the only, nor the most popular, way for the blind to "read" books. In 1934 the talking book, recorded on one of the first long-playing records, was introduced. Today adult readers among America's 250,000 blind persons request about three times as many talking books as books printed in Braille.

Their requests are honored, free of charge, at 27 regional government-sponsored libraries for the blind. Machines on which to play the books are supplied, also at no cost, by lending agencies financed by state and city governments. Phonographs and books are delivered to the homes of sightless readers who have but to open a book cover or turn a switch to let in the light of some of the world's best literature.

Such valuable service to those who cannot see began in 1879 when Congress passed a bill subsidizing the printing of books in embossed types. Less than 20 years later the new Library of Congress (illustra-

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the rest of the way west across the original treaty's "Stony Mountains," now known as the Rocky Mountains.

Actually the line does not match the slight curvature of the parallel, but marches in straight-line spurts between monuments of iron or aluminum-bronze which average one and a third miles apart.

Drawing the western end of the line also nearly brought war, until a treaty of 1846 extended the border from the Rocky Mountains on westward along the 49th parallel. In the presidential campaign of 1844, the rallying cry was "Fifty-four forty or fight!" as Americans laid ringing claim to all the land north to the border of Alaska, which was then owned by Russia.

NOTE: The international boundary between Canada and the United States may be traced on the Society's map of The United States of America.

For additional information, see "Men, Moose, and Mink of Northwest Angle," in *The National Geographic Magazine* for August, 1947; "Northeast of Boston," September, 1945; "Wartime in the Pacific Northwest," October, 1942; "New Brunswick Down by the Sea," May, 1941; and in the GEOGRAPHIC SCHOOL BULLETINS, May 5, 1952, "Great Lakes Are Brimming Over"; and "Parallels Often Made News as U. S. Developed," November 6, 1950.

ANDREW H. BROWN

ON THE DETROIT RIVER, FAR-INLAND SECTION OF AMERICA'S "THIRD COAST," FIREBOATS SPRAY A WATERY SALUTE TO DETROIT'S 250TH BIRTHDAY, CELEBRATED THIS YEAR

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Bulletin No. 5, December 1, 1952

Dancers from Bali Charm American Audiences

GENUINE Balinese music and dancing are being presented in America for the first time as 45 performers from the village of Pliatan on the Indonesian island of Bali tour the United States.

In its native setting of dusty, scented village square or temple courtyard, surrounded in "theater-in-the-round" fashion by sarong-clad audience, Balinese dancing delights Western travelers.

Costumes, topped by ornate headdresses—crowned, in turn, with such vivid tropical flowers as hibiscus, frangipani, and orchids—are a blaze of color (illustration, cover). Only the most beautiful of a naturally handsome people are selected to be trained as dancers.

Balinese Scale Differs from Western

In few forms of the dance is more emphasis placed upon facial expression and movements of the arms, hands, and fingers. Balinese dancing is primitive, yet exquisitely refined; impersonal, yet enlivened with each artist's own original variations. It varies from quiet, conventional love duet to wild monkey dance.

The Balinese scale lacks the "la" of the familiar "do-re-mi." However, the music of the native orchestra, called the *gamelan*, does not seem discordant to the Western ear. Melody and tempo, as the West knows them, are present.

The percussion instruments of the gamelan are mellow, like the xylophone. Flutes, tinkling bells, cymbals, gongs, and throbbing drums are pleasant to American ears.

The ancient Hindu religion of India is the inspiration for the best of Bali's music, dancing, and drama—the three are inseparable. The Balinese themselves came from India. Originally all singing and dancing must have been temple rites, but so powerful a part of his everyday life is his religion that the Balinese does not consider it a sacrilege to perform in a worldly setting, whether it be in a garden during a private feast, or on the stage of an American theater.

Training Begins Early

There are few professional dancers, singers, and actors in Bali. Villages have their own gamelans and troupes of performers. They may be famous as artists, yet earn their livings as chauffeurs, rice farmers (illustration, next page), and blacksmiths.

Dancers begin their training when very young. In the *legong*—dance pantomimes of the Hindu Lasem and Semaradhana stories—the girl artists must retire at the ripe old ages of 12 or 13. Sampih, the Pliatan star of the *kebiyar*, or seated solo interpretation of musical moods by a young male dancer, was the idol of Bali before he was 10.

In addition to the legong, kebiyar, and other dance forms, the *barong* is being presented to American audiences. In this dance, a four-legged monster appears, with two dancers inside the costume to move the legs. Back home in Bali, the same villagers who fear and revere the grotesque

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tion, below) provided a special room for the use of the blind, some 200-odd volumes in raised characters, and a reading hour during which men and women of Washington, D. C., would read aloud.

Within a few months other libraries, in Philadelphia, Chicago, and New York, offered similar services. The Division for the Blind at the Library of Congress selects the books to be printed in Braille or recorded. After a committee representing the blind and their librarians approves the list, orders are placed with printing houses and recording studios for distribution to the regional libraries.

Although light fiction and the classics are popular, the book most in demand is the Bible. One library reports that there is always a waiting list for it, even though each library keeps about 20 talking-book copies of the Bible to five copies of an ordinary book.

CHARLES MARTIN

THE LIBRARY OF CONGRESS GIVES NATION-WIDE SERVICE TO SIGHTLESS AMERICANS

The library's central reading room is 100 feet in diameter. Pillars of red marble support arches framing semicircular windows. The Library of Congress selects books to be put into Braille and on records, the expense of which is financed by an annual congressional appropriation of $1,000,000.

creature laugh hilariously at the clowning antics in which it sometimes indulges.

On this side of the Pacific the *kris* dancers will not go into their usual trances during the dancing of the barong. In Bali, men armed with these sinister curved knives have been known to endanger spectators in the excitement of the dance. Alarmed at the thought of kris charges down the aisles of American theaters, managers in this country have ruled out the trances.

NOTE: Bali is shown on the Society's maps of The Far East and Southeast Asia.

For additional information, see "*Yankee* Roams the Orient," in *The National Geographic Magazine* for March, 1951; "Republican Indonesia Tries Its Wings," January, 1951; "Face of the Netherlands Indies" (20 photographs), February, 1946; "Bali and Points East," March, 1939; and "Netherlands Indies: Patchwork of Peoples" (23 color photographs), June, 1938.

See also, in the GEOGRAPHIC SCHOOL BULLETINS, October 13, 1952, "Hunger Haunts Rich Indonesian Republic."

MAYNARD OWEN WILLIAMS

IN BALI, EVERY POSSIBLE SPOT OF LAND GROWS RICE—THE ISLAND'S STAFF OF LIFE

Valley floors reflect the sky in shining rice paddies, and mountain sides are terraced into additional fields. Harvested rice, tied in bundles, stands in neat rows ready to be threshed. Canals, bamboo pipes, and dams control water supply.